

**WE CLAIM AS OUR INVENTION:**

1. A method for operating high-bit-rate data transmission devices on a subscriber line connecting a subscriber terminal device and a telephone exchange, wherein voice information and low-bit-rate data can also be transmitted on the subscriber line, and wherein during a transmission of high-bit-rate data, a connection for transmitting the high-bit-rate data bypasses a core region of the telephone exchange and connects to a data transmission network as a permanent connection between a high-bit-rate data transmission device at the subscriber side and a high-bit-rate data transmission device at the telephone exchange side and an access device of the data transmission network, the method comprising the steps of:

in a high-bit rate data transmission device that terminates a subscriber line at a telephone exchange side and in a high-bit-rate data transmission device that terminates the subscriber line at a subscriber side, outside a context of a data transmission, operating only those parts of the high-bit-rate data transmission devices that evaluate a criterion indicating a beginning of a data transmission; and operating remaining parts of the high-bit-rate data transmission devices only when the criterion indicates a beginning of a data transmission.

2. The method according to claim 1, further comprising the step of: given use of an xDSL system for high-bit-rate data transmission, evaluating signaling tones that respectively occur in upstream channels and downstream channels as the criterion indicating a beginning of a data transmission.

3. The method according to claim 1, wherein the evaluation of criteria takes place permanently.

4. The method according to claim 1, wherein the evaluation of criteria takes place at definite intervals.

